

Science Instrument Services

Multimission Image Processing Laboratory

Capabilities Description

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for

Delivery 23.0

Prepared by L. Preheim
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Change Log:

July 20, 1999

July 23, 1999

October 13, 1999

October 13, 1999

October 13, 1999

October 13, 1999

Initial issue

Updated to incorporate Integration and Test inputs and System Engineering Review

Reduced the criticality of Ars 9079, 9080, 9686 9061, 9062 to level 3 and removed them from the anomaly fix list for D23.

Moved support for Solaris 7 to D 25.

Added another TRR for D23 in early December 1999.

Decommissioned support for HPUX

Table of Contents

| | |
|--|-----------|
| SIS Long Range Schedule | 6 |
| Short Term Schedule | 7 |
| D23.0 | 6 |
| <i>Operations PERIOD - February 2000 through July 2000</i> | 6 |
| <i>Newly Developed Capabilities:</i> | 6 |
| General: | 6 |
| MIPL Data Management System (MDMS): | 6 |
| XVD | 6 |
| SAGE | 6 |
| MAGIC | 7 |
| JADE | 7 |
| System Build | 7 |
| <i>Anomaly Fixes</i> | 9 |
| <i>Hardware:</i> | 11 |
| <i>Software Environment:</i> | 12 |
| OPERATING SYSTEMS (y2k patches applied where applicable) | 12 |
| Alpha/AXP | 13 |
| VAX | 14 |
| SUN | 15 |
| SGI | 20 |
| HP | 22 |
| D24.0 | 23 |
| <i>Operations PERIOD - July 2000 through February 2001</i> | 23 |
| <i>Newly Developed Capabilities:</i> | 23 |
| General: | 23 |
| MIPL Data Management System (MDMS): | 23 |
| SAGE | 23 |
| MAGIC | 23 |
| System Build | 23 |
| Cassini | 23 |
| Galileo | 23 |
| Mars '01 | 23 |
| SIRTF | 23 |
| ST1 | 24 |
| ST3 | 24 |
| <i>Anomaly Fixes</i> | 24 |
| <i>Hardware</i> | 24 |
| <i>Software Development and Operations Environment</i> | 24 |

| | |
|--|-----------|
| D25.0 | 25 |
| <i>Operations PERIOD - February 2001 through July 2001</i> | 25 |
| <i>Newly Developed Capabilities:</i> | 25 |
| General: | 25 |
| SAGE | 25 |
| MAGIC | 25 |
| System Build | 25 |
| Cassini | 25 |
| Galileo | 25 |
| Mars '01 | 25 |
| SIM | 25 |
| SIRTF | 25 |
| ST3 | 25 |
| <i>Anomaly Fixes</i> | 26 |
| <i>Software Development and Operations Environment</i> | 26 |
| D26.0 | 27 |
| <i>Operations PERIOD - July 2001 through February 2002</i> | 27 |
| <i>Newly Developed Capabilities:</i> | 27 |
| General: | 27 |
| MIPL Data Management System (MDMS): | 27 |
| SAGE | 27 |
| MAGIC | 27 |
| System Build | 27 |
| Cassini | 27 |
| Mars '01 | 27 |
| Mars '03 | 27 |
| SIRTF | 28 |
| SIM | 28 |
| ST3 | 28 |
| <i>Anomaly Fixes</i> | 28 |
| <i>Hardware</i> | 28 |
| <i>Software Development and Operations Environment</i> | 28 |
| D27.0 | 29 |
| <i>Operations PERIOD - February 2002 through July 2002</i> | 29 |
| <i>Newly Developed Capabilities:</i> | 29 |
| General: | 29 |
| MIPL Data Management System (MDMS): | 29 |
| SAGE | 29 |
| MAGIC | 29 |
| System Build | 29 |
| Cassini | 29 |
| Mars '01 | 29 |
| Mars '03 | 29 |
| SIRTF | 29 |
| SIM | 29 |
| ST3 | 29 |

| | |
|--|----|
| <i>Anomaly Fixes</i> | 29 |
| <i>Hardware</i> | 29 |
| <i>Software Development and Operations Environment</i> | 29 |

MIPL Capabilities Description

D23.0

Operations PERIOD - February 2000 through July 2000

Project Support:

- Galileo Extended Mission Orbits E26, I27, G28
- Cassini Cruise and Instrument Check Out 2
- DS1 Extended Mission Operations
- MVACS '98 Landed Operations
- Mars '01 ATLO
- SIRTF Flight Data System Phase 6 (FDS6)

Newly Developed Capabilities:

General:

1. VICAR will be supported on:
 - a. Linux platforms (Red Hat - Intel and Alpha).
 - b. Solaris 2.6
 - c. IRX 6.5
 - d. Windows NT 4.0 (FEI clients only)
 - e. DEC Unix (FEI clients only)
2. Runtime Library updates.
3. Mars terrain model programs
4. Interactive Mosaic Program

MIPL Data Management System (MDMS):

FEI/clients ported to DEC Unix.
FEI3 (K5) client ported to NT
Utility names change to allow both feiAdd and feiadd styles
Input/output Subscribe parameters added
Encryption implemented for Solaris and IRUX.
LiveList
File Type updates to support SIRTF.
Catalog updates to support SIRTF.
Final Catalog to support MVACS Landed Operations.
File Type updates to support Mars '98.
File Type updates to support Cassini.
Catalog updates based on lessons learned during Cassini Earth Encounter 2.
HTML documentation formal delivery.

XVD

Prototype Java Replacement

SAGE

Complete macro capability.

MIPL Capabilities Description

VICAR subcommands in parameter boxes.

MAGIC

Finish and deliver to CM the first phase (Toolbox, Parameter Box).

JADE

Deliver Java VICAR file I/O capability (RTL equivalent), and integration of this as a JAI data source.

System Build

Restructuring to support new TLM builds and new multi-mission objects and streamlined build process.

Cassini – Continued upgrades to infrastructure to support systematic processing, beginning support for telemetry processing, Beginning support for instrument planning and commanding. Catalog updates to support Earth flyby.

DS1 -- Real-time Telemetry Support -- DS1 telemetry processing software is complete and provides support for a content independent downlink protocol. Minor bug fixes will be delivered.

Galileo -- Real-time Telemetry Support -- Galileo continues as a fully functional set of telemetry processing software. Additional capabilities will be add to support automation and improve operability. NIMS systematic processing will be continue to evolve.

Galileo -- Systematic Support

- CATRADIO2, ABLE86 (s), GLLCALNAME (s)- new readout mode
- IBISNAV2- Extend buffer
- IBISUPDATE2- Extend buffer
- MAP3- Extend buffer
- MASKMOS- Extend buffer
- NEWMOS2- Extend buffer
- OMCOR3- Extend buffer
- GALSOS- Extend buffer

M98 -- Real-time Telemetry Support -- Mars 98 telemetry software fully supports EDR generation. Support for predict loading and final catalog schema will be tested and any necessary fixes will be delivered. Additional automation for generating mosaics and terrain maps will be delivered.

Mars '01 – Initial delivery to support telemetry processing, mosaic generation and terrain map generation. Initial catalog support. Both a standalone and a catalog based telempoc. Most tools will run in both Solaris and Linux environments

SIRTF – Real-time telemetry support for all three instruments and ancillary engineering data will be delivered. The software will include the capability to decompress data and interact with the catalog. SIRTF EDRs will use FITS headers and conform to an IPAC/MIPL SIS. SIRTFTelempoc will be capable of merging retransmitted packets and it will generate an end of pass report for transmission to the SIRTF Science Center.

New development system-- Real-time Telemetry Support -- Telemetry processing has been redesigned to operate in a Corba. Current development is focusing on infrastructure. Logging, persistent store and basic support classes along with elements of control will be delivered. The initial delivery will support only rudimentary telemetry processing of one or two existing missions/data sets.

MIPL Capabilities Description

Anomaly Fixes

The following page provides a list of anomalies which should be fixed as part of the D23.0 development process. A serious attempt will be made to eliminate all category 2 anomalies.

Hardware Upgrades

We will replace Coda3 and Coda4 with a pair of current generation servers. One of the replaced servers will go to I&T to provide a multiprocessor testing capability. The fate of the other is undetermined at this time. The starting point for the hardware configuration is provided below.

The standalone server Mipl7 will be upgraded.

Office workstations will be upgrade to Ultra 5's and moved to JPLNet.

MIPL Capabilities Description

Anomaly Fixes

The anomalies chosen for rework in Delivery 23 emphasize a determined effort to remove all category 2 anomalies from the system.

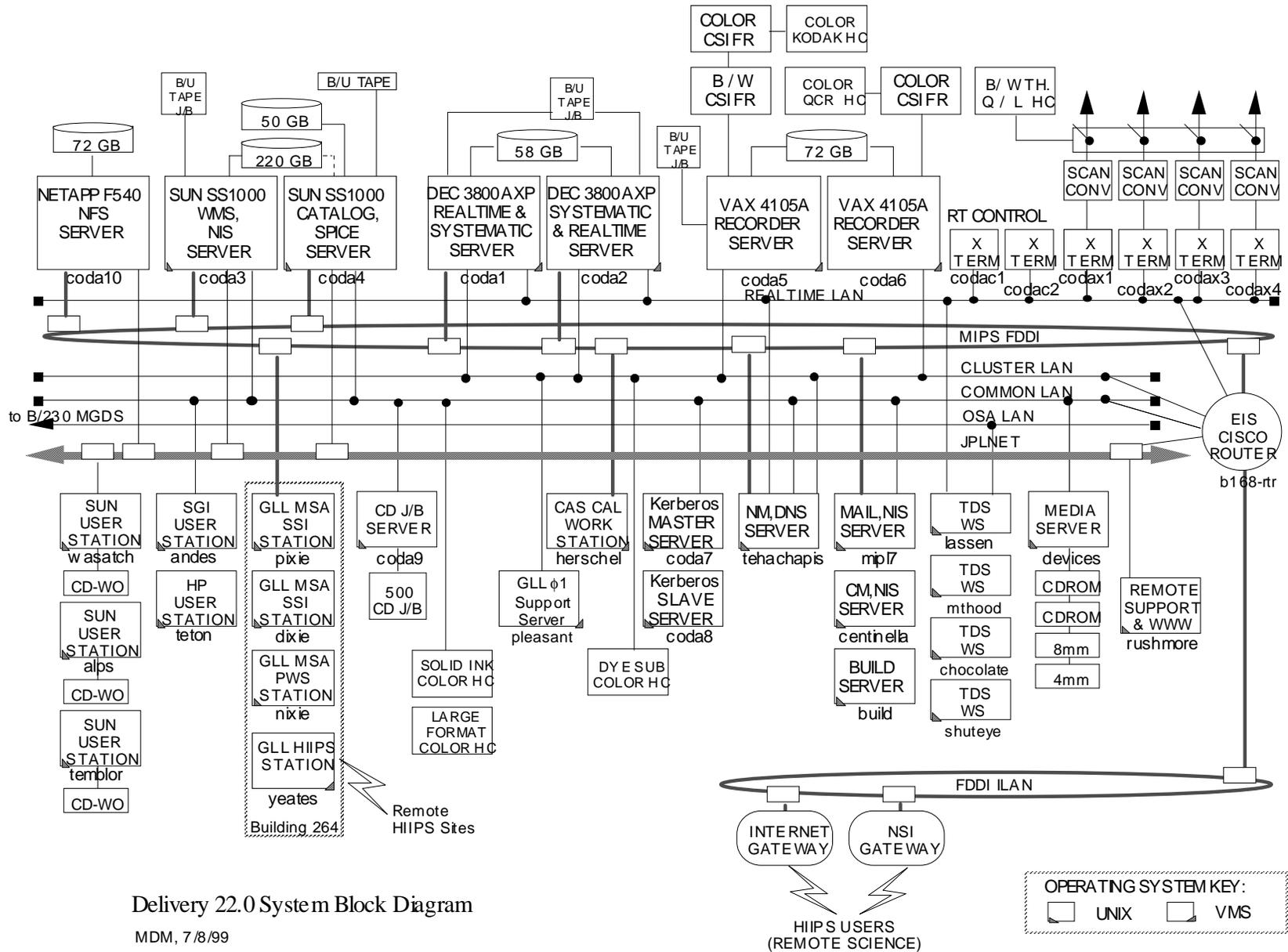
| Rel # | No. | Component | S/S | Criti. | Description |
|-----------------|-----------------|-----------------------|---------------|--------------|---|
| 23.1 | 9365 | dbView | MDMS | 2 | Sunos and IRX batch input format problems |
| 23.1 | 103336 | dbView | MDMS | 2 | Core dumps with defaultMacroFile set. |
| 23.1 | 9005 | DISPOUT | P2 | 2 | Significant differences between platforms. |
| 23.1 | 103138 | FEI | MDMS | 2 | Subscribe options fail on Linux. |
| 23.1 | 100484 | Gll_rts_ssi.com | P2 | 2 | Inconsistent VICAR Label entries |
| 23.1 | 9865 | glltelemproc | P2 | 2 | Negative pws sclk. |
| 23.1 | 100114 | glltelemproc | P2 | 2 | Unexpected ERTs in log file. |
| 23.1 | 100507 | glltelemproc | P2 | 2 | Incorrect sclk when cow used. |
| 23.1 | 103385 | m98telemproc | MPF | 2 | Vicar labels don't match the SIS. |
| 23.1 | 9039 | MAP3 | P2 | 2 | Assorted problems |
| 23.1 | 9041 | MAP3 | P2 | 2 | Map3 does not use the default scale |
| 23.1 | 9042 | MAP3 | P2 | 2 | Assorted test cases cause program suspension |
| 23.1 | 9065 | PWDADMIN | MDMS | 2 | The gui version of pwdadmin is unable to recognize the old password when trying to change the password. |
| 23.1 | 103362 | Rtcntrl | P2 | 2 | Galileo Realtime fails to add raw record to the database due to negative mean compression. |
| 23.1 | 9045 | Schema Changes | MDMS | 2 | Various schema changes needed |
| 23.1 | 9071 | SIMP | MPF | 2 | Labels displayed incorrectly. |
| 23.1 | 9075 | TAE | P1 | 2 | TAE crashes |
| 23.1 | 9433 | Tp.com | Mpf | 2 | Did not correctly read tiepoint file. |
| 23.1 | 9079 | TRACKER3 | P2 | 2 | Abnormal process termination. |
| 23.1 | 9080 | TRACKER3 | P2 | 2 | Abnormal process termination |
| 23.1 | 9084 | XVD | Gui | 2 | Zooming crashes XVD |
| 23.2 | 100458 | FEI client timeout | MDMS | 2 | FEI clients can timeout if Kerberos host is busy. |
| 23.2 | 9686 | HIST2D.COM | P2 | 2 | Needs to be ported. |
| 23.2 | 9044 | MAPLABPROG | P2 | 2 | Assorted problems |
| 23.2 | 103427 | mssserver | P2 | 2 | Children processes spawned are not closing |
| 23.2 | 9064 | OTFI | P2 | 2 | Invalid number of characters initialized in an array |
| 23.2 | 9062 | PHOTFUNC | P2 | 2 | The call to xvmessage needs to be changed to prnt. |
| 23.2 | 9068 | RGB2PSUEDO | P2 | 2 | Program can not find property info in the label. |
| 23.2 | 9085 | XYYTOSPEC | P2 | 2 | Different number of color cubes, bad path name |
| 23.2 | 9087 | XYZSUN | MPF | 2 | Not reading the input tiepoint file correctly |
| 23.2 | 101408 | Cassini catalog | MDMS | 3 | Some columns do not update |
| 23.2 | 100499 | dbView | MDMS | 3 | Feedback dots don't work |

MIPL Capabilities Description

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|------|--------|-----------------|------|---|--|
| 23.2 | 100203 | Ds1Procs.sql | Sql | 3 | FileBlocks stored procedure crashes |
| 23.2 | 100837 | Fei3 | MDMS | 3 | Filetypes table trigger error |
| 23.2 | 100838 | Fei3 | MDMS | 3 | DS1 FEI server core dumps after machine reboot |
| 23.2 | 100919 | Fei3 | MDMS | 3 | Client restart doesn't work after ticket expires |
| 23.2 | 100920 | Fei3 | MDMS | 3 | Some error messages go to the console only |
| 23.2 | 100778 | PwdServer_2 | MDMS | 3 | Binary characters in the log file |
| 23.2 | 101422 | PwdServer_2 | MDMS | 3 | Password server crashes |
| 23.2 | 9280 | SAGE | gui | 3 | Alpha only – second sage does not initialize icon names to default |
| 23.2 | 9683 | sky | p2 | 3 | Sky segVs |
| 23.2 | 9588 | tgl_pws_bin_ph2 | p2 | 3 | Abends under SGI |
| 23.2 | 9650 | tracker3 | p2 | 3 | Crashes under VMS |

MIPL Capabilities Description

Hardware:



Delivery 22.0 System Block Diagram

MDM, 7/8/99

MIPL Capabilities Description

Software Environment:

OPERATING SYSTEMS (y2k patches applied where applicable)

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|--------|---------|---------|------------------|---|
| Sun | Sun | SunOS | 4.1.4 | Operating system | Tehachapis,mipl7, mtcolor |
| Sun | Sun | Solaris | 2.6 | Operating system | coda3,coda4,coda7, coda8, charlotte, ssv-sol, maxwell, rushmore, pixie, nixie, dixie, all autoclient workstations |
| Sun | Sun | Solaris | 2.5.1 | Operating system | centinela |
| Sun | Sun | Solaris | 2.4 | Operating system | coda9 |
| Sun | Sun | Solaris | 2.3 | Operating system | Breithorn |
| SGI | SGI | Irix | 6.5 | Operating system | andes |
| HP | HP | HPUX | 10.20 | Operating system | teton |

MIPL Capabilities Description

Alpha/AXP

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|--------------------------------|--------------------|--|--|--------------|
| AXP | Compaq/Dec | OpenVMS | 6.2 w/ y2k patches | Operating System | coda1, coda2 |
| AXP | Compaq/Dec | C | 4.0 | C compiler | coda1, coda2 |
| AXP | Compaq/Dec | C++ | 1.3A | C++ compiler | coda1, coda2 |
| AXP | KL Group 1 user float | XRT graph-motif | 2.4.0 | XRT graph-motif | coda1 |
| AXP | KL Group 1 user float | XRT 3d-motif | 2.1.0 | XRT 3d-motif D-float version | coda1 |
| AXP | KL Group 1 user float | XRT table-motif | 2.0.0 | XRT table-motif | coda1 |
| AXP | Compaq/Dec | BKR | 4.2 | Compaq/Dec book reader | coda1,coda2 |
| AXP | Compaq/Dec | FORTTRAN | 6.2 | FORTTRAN compiler | coda1, coda2 |
| AXP | Compaq/Dec | Compaq/Decwindows | 1.2-4980120 | X11+Motif for VMS | coda1, coda2 |
| AXP | Compaq/Dec | DTM | 3.5-2 | Compaq/Dec Test Manager | coda1, coda2 |
| AXP | Process Software | MultiNet | 4.1A | TCP/IP for VMS | coda1, coda2 |
| AXP | Ergonmic Solutions | Rampage | 1.1 | Paging software | coda1 |
| AXP | Century Computing + GSFC | TAE | 5.2 | Transportable Application Environment | coda1,coda2 |
| AXP | NCSA | Xmosaic | 2.0 | hypertext browser | coda1,coda2 |
| AXP | Netscape | Netscape | requested, not installed due to other upgrades needed | web browser | |
| AXP | JPL | Math77 | 5.0 | JPL Math library | coda1,coda2 |
| AXP | University of Tenn, ORNL | pvm | 3.37 | parallel virtual machine system | coda1,coda2 |

MIPL Capabilities Description

VAX

| Platform | Vendor | Product | Version | Description | Used On: |
|-----------------|------------------|----------------|--------------------|-------------------------|-----------------|
| VAX | Compaq/Dec | OpenVMS | 6.2 w/ y2k patches | Operating System | coda5,coda6 |
| VAX | Compaq/Dec | C | 5.7 | C compiler | coda5,coda6 |
| VAX | Compaq/Dec | C++ | 5.6-013 | C++ compiler | coda5,coda6 |
| VAX | Compaq/Dec | Fortran | 6.5 | Fortran compiler | coda5,coda6 |
| VAX | Compaq/Dec | DTM | 3.5-2 | Compaq/Dec test manager | coda5,coda6 |
| VAX | Compaq/Dec | BKR | 4.2 | Compaq/Dec book reader | coda5,coda6 |
| VAX | Process Software | MultiNet | 4.1A | TCP/IP for VMS | coda5,coda6 |
| VAX | vendor + inhouse | | | Film recorder drivers | coda5,coda6 |

MIPL Capabilities Description

SUN

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|--|--|-------------------|--|---|
| NCD | NCD | NCDware | 4.0.118 | X-windows terminal software | MIPLx1... MIPLx6 |
| Sun | Interactive Development Environment, Inc | IDE CLC++ CLCC CODECENTER OBJECTCENTER | n/a | Development tool | mipl7 - LICENCE SERVER arsia - Software |
| Sun | KL Group | XRT graph-motif | 2.4.0 | XRT graph-motif | mipl7 |
| Sun | KL Group | XRT 3d-motif | 2.1.0 | XRT 3d-motif | mipl7 |
| Sun | KL Group | XRT table-motif | 2.0.0 | XRT table-motif | mipl7 |
| Sun | KL Group | XRT graph-motif | 2.4.0 | XRT graph-motif | coda3 |
| Sun | KL Group | XRT 3d-motif | 2.1.0 | XRT 3d-motif | coda3 |
| Sun | KL Group | XRT table-motif | 2.0.0 | XRT table-motif | coda3 |
| Sun | MIT | X11R5 | R5 | Windowing system | all |
| Sun | Sun | Openwindows | 3.6 | Windowing system | Solr 2.6 systems |
| Sun | Pure Software (3 licenses) | Purify | 4.1 | Development tool | coda3 |
| Sun | University of Maryland | Amanda | 2.2.6 | Network backup tool (Advanced Maryland Automatic Disk Archiver) | breithorn, non- autoclient workstations |
| Sun | Sterling Software | Alexandria | 3.8 Patch 1 | Backup utility | coda3 |
| Sun | Veritas | Volume Mgr | 2.51 | On-line storage management software | coda3, coda4 |
| Sun | Veritas | File System | 3.21 | File System | coda3, coda4 |
| Sun | Cisco | SBUS Adapter Driver | 2.1, 3.1, 3.2 4.1 | FDDI Card driver | Mtcolor, mipl7 coda3, coda4 |

MIPL Capabilities Description

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|---------------------------------|--------------------|-------------------|---------------------------------------|---|
| Sun | NCSA | httpd | | WWW document server | tehachapis |
| Sun | Mercury Interactive | xrunner | 4.0.1 | X based regression testing | mipl7 (can run on other non-VITEC Suns) |
| Sun | Sybase | Sybase Open Client | 11.1.1 | Sybase Client | all |
| Sun | Sybase | Sybase server | 11.9.2 | Sybase server | Coda4 |
| Sun | Century Computing + GSFC | TAE | 5.2 | Transportable Application Environment | all |
| Sun | Boston Business Systems | edt+ | 7.17 | EDT text editor for UNIX | all |
| Sun | Research Systems Inc. 1 user | IDL | 4.5.2 | Data Processing Tool | all |
| Sun | GNU project | perl | 5.005.02 5.001 | scripting language | all |
| Sun | Research Systems, Inc 1 user | ENVI | 2.0 | Data processing tool | all |
| Sun | Curtin University | netman | 1.1 | network monitoring tool | tehachapis |
| Sun | Curtin University | interman | 1.1 | network monitoring tool | tehachapis |
| Sun | Curtin University | etherman | 1.1a | network monitoring tool | tehachapis |
| Sun | Curtin University | packetman | 1.1 | network monitoring tool | tehachapis |
| Sun | MIT | xautolock | | automatic screenlock | all Suns except coda3 and coda4 |
| Sun | Northeastern University | req | 2.7 | request management system | Mipl7 |
| Sun | Northeastern University | tkreq | | request management system | Mipl7 |
| Sun | Northeastern University | td | | request management system | Mipl7 |
| Sun | Northeastern University | tk | 3.6 | request management system | Mipl7 |
| Sun | UC Berkeley | tcl | 7.3 | needed for CDE scripting | |

MIPL Capabilities Description

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|-----------------------------|------------|--|---------------------------------------|--|
| Sun | public domain | Xarchie | | internet browser | all |
| Sun | Univ Minnesota | Xgopher | | internet document transfer | all |
| Sun | Northwestern Univ | top | 3.4 (SunOS) 3.5beta8 - (Solaris) | cpu monitor tool | all |
| Sun | USC | sysinfo | 2.1.2 (SunOS) 3.4 (Solaris) | system hw info display tool | all |
| Sun | OSF | Motif | | Windowing environment | all except - coda3, coda4. |
| Sun | Colorado State | sudo | 1.31pl4 (Solaris) 1.53 (SunOS) | Superuser environment wrapper | all |
| Sun | Cornell University | tcsh | 6.06 | Default shell | all |
| Sun | GNU project | emacs | 19.31, 19.34 | extensible window editor | all |
| Sun | NCSA | Xmosaic | 2.6, 2.7Beta4 | hypertext browser | all |
| Sun | RogueWave | tool.h++ | 7.0.1 | C++ development library | all |
| Sun | MIT | kerberos | 4, 5 | secure client server data transfer | all |
| Sun | University of Delaware | | 3.1 (SunOS) 3.3c (Solaris) | Network Time Protocol (ntp) daemon | all |
| Sun | Cornell University | gated | 3.5.8 | Network routing daemon | Coda3,coda4, Hosts with 2 network interfaces |
| Sun | JPL | Math77 | 5.0 | JPL Math library | all |
| Sun | University of Tenn, ORNL | pvm | 3.37 | parallel virtual machine system | all |
| Sun | Sun | C | 3.0.1 | Compiler | all |
| Sun | Sun | C++ | 4.0.1 | Compiler | all |
| Sun | | Fortran 77 | 3.01 | Compiler | all |
| Sun | | pine | 3.95 | mail tool | All |
| Sun | | elm | 2.4 pl 24 pgp2 | mail tool | All |
| Sun | | exmh | 1.5.3 | mail tool | All |

MIPL Capabilities Description

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|---------------|------------------------------|--|---|--|
| Sun | TransArc | DCE | 2.0 | | pappasmurf, smurfette, smurfman, mentha, spacemouse, porgy |
| Sun | Orbix | CORBA | 2.2 MT | | spacemouse |
| Sun | Sun | CDE | | desktop environment | Solaris systems |
| Sun | Netscape | Netscape | 4.08 & lower | web browser | all |
| Sun | | Java Dev Kit | 1.02, 1.1.4, 1.2 | development kit | |
| Sun | Platnum | CCC/manager | 3.1.1.2 | CM tool | mtcolor |
| Sun | Platnum | CCC/Harvest | 3.01 | CM tool | centinela server, client all |
| Sun | public domain | xpm | 3.4F | X pixmap library | Used with sage |
| Sun | USGS | ISIS | 970214 | Image processing system | Solaris systems |
| Sun | Candela | color management software | CL511, CL514 | color management software | mtcolor |
| Sun | | mvp | 3.0 (/usr/local/vicar/e xternal) | Multimission VICAR Planner, AI planner | |
| Sun | | spice | Current MIPS delivery version | NAIF toolkit for GLL | |
| Sun | | pds_label_lib | 4.0 | planetary data system label library for read/write/process PDS labels | |
| Sun | | pds_lablib3 | 1.0 | PDS Label Library Light | |
| Sun | | aesop | 2.5 | Extensible Motif-based on board-algorithm evaluation system | |
| Sun | | DD++ | 1.2 | C++ wrapper for the Motif 1.2 drag and drop preregister protocol. | |

MIPL Capabilities Description

| Platform | Vendor | Product | Version | Description | Used on: |
|-----------------|---------------|----------------|----------------|--|-----------------|
| Sun | | MotifApp | 1.9 & below | Doug Young's C++/Motif user interface class, modified by MIPS. | |

MIPL Capabilities Description

SGI

| Platform | Vendor | Product | Version | Description | Used On: |
|----------|---------------------------------|---------------|-------------------------------|---|------------------------|
| SGI | SGI | Irix | 6.5 | Operating system | andes |
| SGI | Century Computing + GSFC | TAE | 5.2 | Transportable Application Environment | Andes |
| SGI | Research Systems Inc. 1 user | IDL | 4.0.1 | Data Processing Tool | Andes |
| SGI | GNU project | perl | 5.004.04 | scripting language | Andes |
| SGI | Research Systems, Inc 1 user | ENVI | 2.0 | Data processing tool | Andes |
| SGI | Cornell University | tcsh | 6.06 | Default shell | Andes |
| SGI | GNU project | emacs | 19.31, 19.34 | extensible window editor | Andes |
| SGI | NCSA | Xmosaic | 2.6, 2.7Beta4 | hypertext browser | Andes |
| SGI | RogueWave | tool.h++ | 7.0.1 | C++ development library | Andes |
| SGI | MIT | kerberos | 4, 5 | secure client server data transfer | Andes |
| SGI | University of Delaware | xntpd | 3.3c (Sun) 1.2, 2.2.1 (HP) | Network Time Protocol (ntp) daemon | Andes |
| SGI | University of Tenn, ORNL | pvm | 3.37 | parallel virtual machinge system | Andes |
| SGI | public domain | xpm | 3.4F | X pixmap library | Andes (used with sage) |
| SGI | | mvp | 3.0 | Multimission VICAR Planner, AI planner | Andes |
| SGI | | spice | Current MIPS delivery version | NAIF toolkit for GLL | Andes |
| SGI | | pds_label_lib | 4.0 | planetary data system label library for read/write/process PDS labels | Andes |

MIPL Capabilities Description

| Platform | Vendor | Product | Version | Description | Used On: |
|-----------------|---------------|----------------|----------------|---|-----------------|
| SGI | | pds_lablib3 | 1.0 | PDS Label Library Light | Andes |
| SGI | | aesop | 2.2 | Extensible Motif-based on board-algorithm evaluation system | Andes |
| SGI | | DD++ | 1.2 | C++ wrapper for the Motif 1.2 drag and drop preregister protocol. | Andes |
| SGI | | MotifApp | 1.9 & below | Doug Young's C++/Motif user interface class, modified by MIPS. | Andes |

MIPL Capabilities Description

HP

| Platform | Vendor | Product | Version | Description | Used on: |
|----------|--------------------------|---------------|---------------------------------|---|----------|
| HP | Century Computing + GSFC | TAE | 5.2 | Transportable Application Environment | Teton |
| HP | GNU project | perl | 5.001 | scripting language | Teton |
| HP | Cornell University | tcsh | 6.06 | Default shell | Teton |
| HP | University of Delaware | xntpd | 3.4x | Network Time Protocol (ntp) daemon | Teton |
| HP | UC Berkeley | tcl | 7.3 | needed for CDE scripting | Teton |
| HP | HP | CDE | Bundled with system | common desktop environment | Teton |
| HP | | mvp | 3.0 (/usr/local/vicar/external) | Multimission VICAR Planner, AI planner | Teton |
| HP | | spice | Current MIPS delivery version | NAIF toolkit for GLL | Teton |
| HP | | pds_label_lib | 4.0 | planetary data system label library for read/write/process PDS labels | Teton |
| HP | | pds_lablib3 | 1.0 | PDS Label Library Light | Teton |
| HP | | aesop | 2.2 | Extensible Motif-based on board-algorithm evaluation system | Teton |
| HP | | DD++ | 1.2 | C++ wrapper for the Motif 1.2 drag and drop preregister protocol. | Teton |
| HP | | MotifApp | 1.9 & below | Doug Young's C++/Motif user interface class, modified by MIPS. | Teton |

D24.0

Operations PERIOD - July 2000 through February 2001

Project Support:

- Galileo Extended Extended Mission
- Cassini Jupiter Encounter
- Mars '01 ATLO, Launch and cruise
- ST1 Encounter.
- ST3 ATLO
- SIRTF ATLO

Newly Developed Capabilities:

General:

1. VICAR will be supported on:
 - a. Linux platforms (Red Hat - Intel and Alpha).
 - b. Solaris 2.6
 - c. IRX 6.5
 - d. Windows NT 4.0 (FEI clients only)
 - e. DEC Unix (FEI clients only)
2. Runtime Library updates.

MIPL Data Management System (MDMS):

SAGE

MAGIC

System Build

Cassini

This delivery will support Jupiter encounter. Expect a large development effort to finish baselining the uplink software and the downlink pipeline. Also possible is a large development to support 11 additional instruments.

Galileo

There will be a cooperative campaign with Cassini. Expect continued updates to support project mandated changes. This will bring an end to Galileo support.

Mars '01

The spacecraft will complete ATLO. There will be selected updates based on the ATLO testing.

SIRTF

SIRTF will be in ATLO. There will be updates based on late changes to the instrument telemetry.

MIPL Capabilities Description

ST1

Expect continued “lights-out” operation.

ST3

ST3 will be a “SIRTF-like” mission with the science processing done at IPAC and the level 1 processing done by SIS. Look for some changes to the ground system architecture as instrument/spacecraft modeling becomes more important.

Anomaly Fixes

Hardware Upgrades

Expect significant server changes to support Cassini Jupiter encounter.

Anomaly Fixes

| No. | Component | S/S | Criticality. | Description |
|------|--------------|------|--------------|--|
| 9027 | Gll_rts_pwsh | P2 | 3 | PWH2 sclkstopcnt was updated incorrectly |
| 9037 | Manmatch | P2 | 3 | Icons disappear |
| 9038 | Manmatch | P2 | 3 | Faulty SIMQ MATIX IS SINGULAR message |
| 9040 | Map3 | P2 | 3 | Does not update Galileo label properly |
| 9043 | Map3 | P2 | 3 | Extreme value tests |
| 9046 | Mosplot | P2 | 3 | Stack dump on the alpha |
| 9056 | MVP | P2 | 3 | Crashes when missing a file |
| 9059 | NAV | P2 | 3 | Limfit restoration of image fails |
| 9060 | NEWMOS | P2 | 3 | Differences between SGI and VMS outputs |
| 9070 | RT_DSP_CNTRL | P2 | 3 | Problem with pixels under the cursor |
| 9174 | Mpftilt | MPF | 3 | Documentation and test cases missing |
| 9311 | Gridlocb | P2 | 3 | Documentation inadequate |
| 9365 | dbView | MDMS | 3 | Numerous small problems |
| 9420 | M98telemproc | MPF | 3 | Incorrect Vicar Labels |
| 9524 | Pwssnip | P2 | 3 | Param. EKID inconsistent with catalog |
| 9578 | Vqic | P2 | 3 | Stack dump |
| 9580 | dbWindows | MDMS | 3 | Error messages on SGI and Solaris when program exits |
| | | | | |
| | | | | |
| | | | | |

Hardware

Software Development and Operations Environment

D25.0

Operations PERIOD - February 2001 through July 2001

Project Support:

- Cassini Post-launch Calibration completion
- Cassini Cruise Operations
- Galileo End of Mission
- Mars '01 Launch and Instrument check out
- ST3 ATLO
- SIRTf IOC
- SIM Development

Newly Developed Capabilities:

General:

1. VICAR will be supported on:
 - a. Linux platforms (Red Hat - Intel and Alpha).
 - b. Solaris 2.7**
 - c. IRIX 6.5
 - d. Windows NT 4.0 (FEI clients only)
 - e. DEC Unix (FEI clients only)
2. Runtime Library updates.

SAGE

MAGIC

System Build

Cassini

Galileo

Mars '01

SIM

SIRTf

ST3

MIPL Capabilities Description

Anomaly Fixes

| No. | Component | S/S | Critical ity. | Description |
|-----|-----------|-----|------------------|-------------|
| | | | | |
| | | | | |
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| | | | | |

Hardware:

Software Development and Operations Environment

D26.0

Operations PERIOD - July 2001 through February 2002

Project Support:

- Cassini Science Cruise
- Mars '01 Landed Operations
- Mars '03 Development
- SIM Development.
- SIRTf Flight Operations
- ST3 Launch and Operations

Newly Developed Capabilities:

General:

VICAR will be supported on:

1. Linux platforms (Red Hat - Intel and Alpha).
2. Solaris 2.6
3. Solaris 2.7
4. IRIX 6.5
5. Windows NT 4.0 (FEI clients only)

MIPL Data Management System (MDMS):

SAGE

MAGIC

System Build

Fully product-“ized” system build procedures.

Cassini

Continued upgrades to infrastructure to support systematic processing, full support for telemetry processing, preliminary support for instrument planning and commanding.

Mars '01

Real-time Telemetry Support -- Mars '01 telemetry software will fully support EDR generation. Educational outreach support will be delivered.

Mars '03

Support of Mars '03 ATLO.

MIPL Capabilities Description

SIRTF

There will be continued low level development as a result of ICO.

SIM

SIM will require ATLO and Launch support.

ST3

Real-time Telemetry Support -- DS3 telemetry processing software is complete. Minor bug fixes will be delivered.

Anomaly Fixes

| No. | Component | S/S | Critical ity. | Description |
|-----|-----------|-----|------------------|-------------|
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| | | | | |

Hardware

Software Development and Operations Environment

D27.0

Operations PERIOD - February 2002 through July 2002

Project Support:

- Cassini Science Cruise
- Mars '01 Landed Operations
- Mars '03 Development
- SIM Development.
- SIRTF Flight Operations
- ST3 Launch and Operations

Newly Developed Capabilities:

General:

VICAR will be supported on:

MIPL Data Management System (MDMS):

SAGE

MAGIC

System Build

Cassini

Mars '01

Mars '03

SIRTF

SIM

ST3

Anomaly Fixes

Hardware

Software Development and Operations Environment